

BUB/CTE/2014-15/

Date: 29-05-2015

TEST REPORT ON WET MIX MACADAM MIX

(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.

{Project*: Improvements to Road and Drains at Balaji Krupa Layout 1st Cross to 3rd Cross in
Ward No.05, Byatarayanapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 27-05-2015

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Sambashiva, Contractor, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

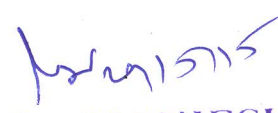
Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, IV Revision- 2001
53.00	100.00	100
45.00	96.30	95-100
26.50	---	-
22.40	72.80	60-80
11.20	42.60	40-60
4.75	39.10	25-40
2.36	28.00	15-30
0.600	19.30	8-22
0.075	3.00	0-8

*As Furnished by Client

The Results relate only to the items tested


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BUB/CTE/2014-15/

Date: 03-06-2015

TEST REPORT ON WET MIX MACADAM MIX

(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.

{Project*: Improvements to Road and Drains at Balaji Krupa Layout 1st Cross to 3rd Cross in
Ward No.05, Byatarayanapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 30-05-2015

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Sambashiva, Contractor, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

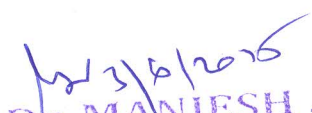
Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, IV Revision- 2001
53.00	100.00	100
45.00	96.30	95-100
26.50	---	-
22.40	72.80	60-80
11.20	42.60	40-60
4.75	39.10	25-40
2.36	28.00	15-30
0.600	19.30	8-22
0.075	3.00	0-8

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BUB/CTE/2014-15/

Date: 23-06-2015

TEST REPORT ON BITUMINOUS MIXES
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: Testing of Bitumen Premix Sample. (Semi Dense Bituminous Concrete).

{Project*: Improvements to Road and Drains at Balaji Krupa Layout 1st Cross to 3rd Cross in Ward No.05, Byatarayanapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 22-06-2015

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Sambashiva, Contractor, Bangalore.

TEST RESULTS :

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.06 %**
2. **Gradation Test :**

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-15 of MORTH Specifications-2001 (Grading - 2)
13.2	100.00	100
9.5	95.20	90—100
4.75	47.10	35—51
2.36	25.40	24—39
1.18	18.80	15—30
0.3	14.60	09—19
0.075	4.90	03—08

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BUB/CTE/2014-15

1. TESTING OF FINE AGGREGATES :

Date: 16-05-2015

Sub: Testing of Fine Aggregates.

{Project*: Improvements to Road and Drains at Balaji Krupa Layout 1st Cross to 3rd Cross in Ward No.05, Byatarayanapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 13-05-2015

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Sambashiva, Contractor, Bangalore.

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002)			Remarks
		Percentage Passing			
		Zone-I	Zone-II	Zone -III	
04.75	95.00	90-100	90-100	90-100	The Sample Conforms to Grading Zone-II
02.36	84.20	60-95	75-100	85-100	
01.18	74.50	30-70	55-90	75-100	
600. mic	46.50	15-34	35-59	60-79	
300.mic	20.50	5-20	8-30	12-40	
150.mic	3.50	0-10	0-10	0-10	

TABLE 1.2 ;

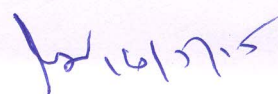
Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Silt Content	001	1.49 %	Not more than 8%
2.	Specific Gravity	----	2.59	-----

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BUB/CTE/2014-15

1. TESTING OF COARSE AGGREGATES (40 mm):

Date: 16-05-2015

Sub: Testing of Coarse Aggregates.

Project*: Improvements to Road and Drains at Balaji Krupa Layout 1st Cross to 3rd Cross in
Ward No.05, Byatarayanapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 13-05-2015

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Sambashiva, Contractor, Bangalore.

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing 40 mm Sample	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
		Single size	Graded
40mm	96.50	85-100	95 - 100
20mm	63.80	0 -20	30- 70
10mm	21.20	0 -5	10- 35
4.75mm	Nil	-----	0 - 5

TABLE 12 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	As above	16.35 %	Not to exceed 25 %
2.	Crushing value	----,----	26.30%	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

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BUB/CTE/2014-15

1. TEST REPORT ON CEMENT:

Date: 24-05-2015

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).

{Project*: Improvements to Road and Drains at Balaji Krupa Layout 1st Cross to 3rd Cross in Ward No.05, Byatarayanapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 13-05-2015

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Sambashiva, Contractor, Bangalore.

PHYSICAL TESTS ON CEMENT

Brand* : Birla
Grade * : 53
Type * : OPC
Date : 16-05-2015 to 23-05-2015

SL No	Name of Test	Results	Requirements as per IS 12269-1987
		Cement Sample	
1	Initial setting time	150min	Shall not be less than 30 min
2	Final setting time	255min	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	2.70 %	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	1.60 mm	Shall not be more than 10 mm
5	Compressive strength		
	c) 3 days (average of three results)	28.80 N/ Sq mm	Shall not be less than 27 N/Sqmm
	d) 7 days (average of three results)	42.80 N/Sq mm	Shall not be less than 37N/Sqmm

*As Furnished by Client.

The Results relate only to the items tested.

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BUB/CTE/2014-15/

Date: 16-05-2015

1. TEST REPORT ON REINFORCEMENT STEEL:

Sub: Testing of Reinforcement Steel of diameter 12 mm.

{Project*: Improvements to Road and Drains at Balaji Krupa Layout 1st Cross to 3rd Cross in Ward No.05, Byatarayanapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 13-05-2015

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Sambashiva, Contractor, Bangalore.

TABLE - 1

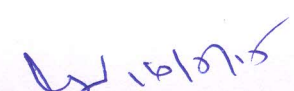
SL No	Details	For 12mm	
		Test Results	Min Req as per IS 1786-2008
01	Observed diameter of bar	12.0mm	12.0mm
02	Observed Wt/m Length Kg/m	0.888	0.834
03	Proof stress/Yield stress, f_y , N/mm ²	558.0	500.0
04	Bend/ Re bend Test	Ok	---
05	Percentage of Elongation, %	19.00	12.00
06	Ultimate Tensile Strength N/mm ²	628.0	545.0

*As furnished by Client.

The Results relate only to the items tested.


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BUB/CTE/2014-15/

DATE: 23-06-2015

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (28 days Compressive Strength)

{Project*: Improvements to Road and Drains at Balaji Krupa Layout 1st Cross to 3rd Cross in
Ward No.05, Byatarayanapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 22-06-2015

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Sambashiva, Contractor, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M₂₀

TABLE 1.1 :

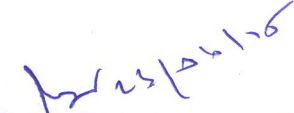
Sl No	Location/ Identification *	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm ²	Maximum Load in K.N	Compressive Strength (N/ mm ²)	Avg. Value
1	001	25-05-15	22-06-15	28	22500	515	22.88	22.88
	002	"	"	"	"	510	22.66	
	003	"	"	"	"	520	23.11	

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